

The ASR describes Range 40 as Squad Attack Range that was built in the Vietnam War and abandoned by 1974. It is reported that only blank ammunition and pyrotechnic materials were used at this range (USACE, 1999a).

1.2.2 Aerial Photographs

Available aerial photographs were reviewed to reveal any land-use activity at Parcels 94Q and 146Q. Only the aerial photographs that showed distinct surface activity changes are presented in this SFSP. The following paragraphs summarize the review of aerial photographs for the years 1937, 1940, 1954, 1969, 1976, 1982, 1994, and 1998.

1937. The northeastern portion of Parcel 146Q appears to be cleared in this photograph. Similar clearing, visible to the east and northeast, appears to be associated with agricultural activity. This aerial photograph was taken before the U.S. government began leasing the land in the Choccolocco Corridor in 1941.

1940. Additional clearing in the western and southeastern areas of Parcel 146Q is apparent in the 1940 aerial photograph (Figure 1-4). Similar clearing, believed to be associated with agricultural activity, is visible to the east and the northeast. This aerial photograph was taken before the U.S. government began leasing the land in the Choccolocco Corridor in 1941.

1954. An east/west-oriented rectangular cleared area is visible in the northeastern portion of Parcel 146Q (Figure 1-5). An east-west road or trail is visible in the center of the cleared area. The cleared area extends beyond the parcel boundary to the east. The remainder of Parcel 146Q and the area of investigation for Parcel 94Q appear to be vegetated.

1969. An irregularly shaped northwest/southeast-oriented rectangular cleared area is visible in the 1969 aerial photograph. The southeastern portion is more extensively cleared than the northwestern portion; a wooded area is visible in the center of the cleared parcel. Two roads meet in the northeastern area of Parcel 94Q (Figure 1-6). The remainder of the area of investigation for Parcel 94Q and Parcel 146Q appears to be vegetated.

1976. The majority of the cleared area visible in the 1969 photograph appears to be revegetated in the 1976 photograph. A small portion to the east remains cleared. Activities are not apparent within this cleared area; however, additional roads or trails lead to the cleared area. The remainder of the area of investigation for Parcel 94Q and Parcel 146Q is vegetated.

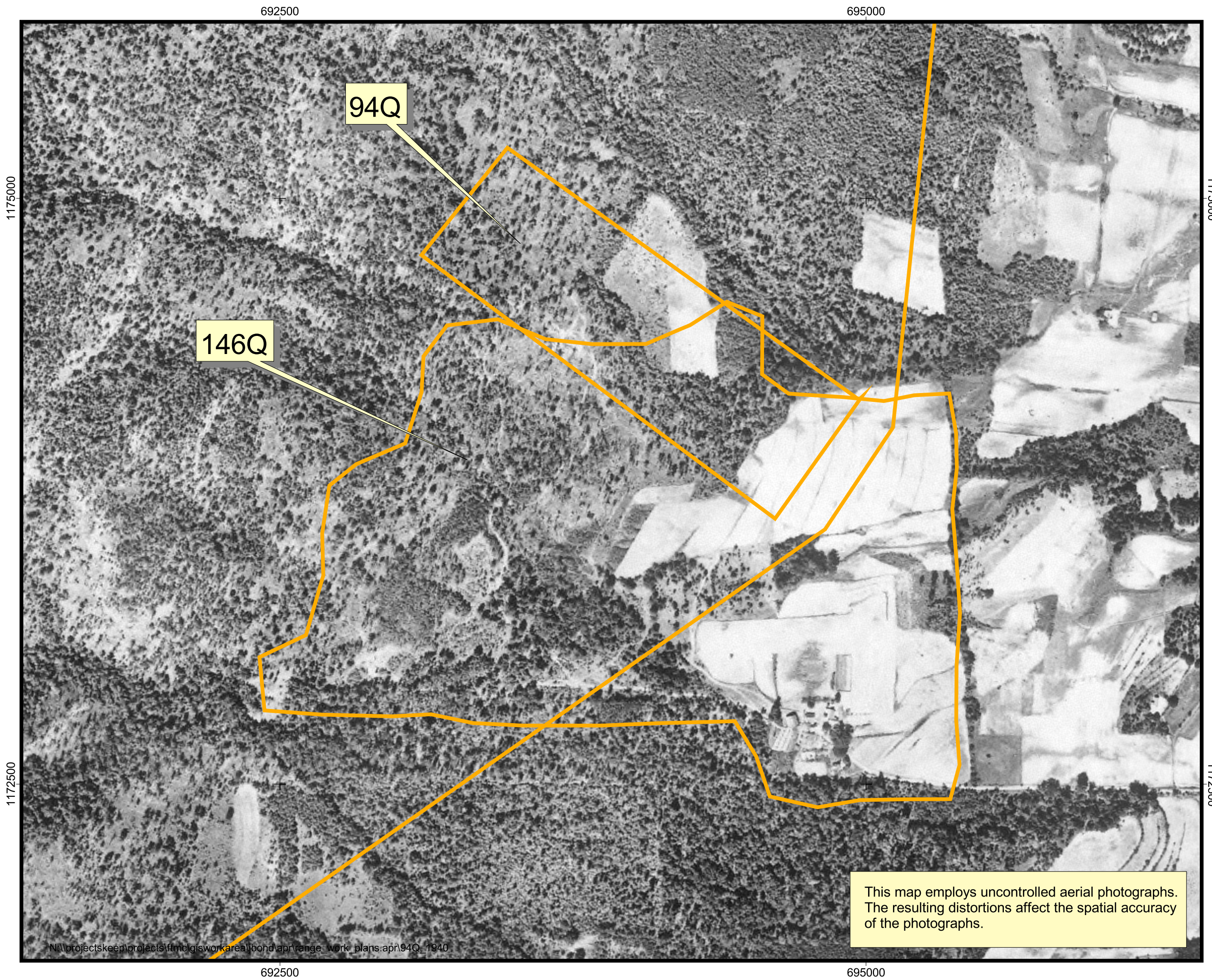


Figure 1-4

1940 Aerial Photograph

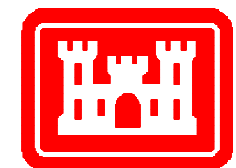
Former Range 40,
Parcel 94Q, and
Range, Choccolocco
Corridor, Parcel 146Q
Fort McClellan, AL

Legend

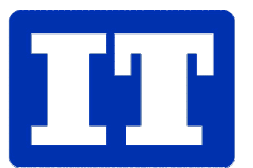
Area of Investigation/
Parcel Boundary/
Range Safety Fan

0 400 Feet

NAD83 State Plane Coordinates



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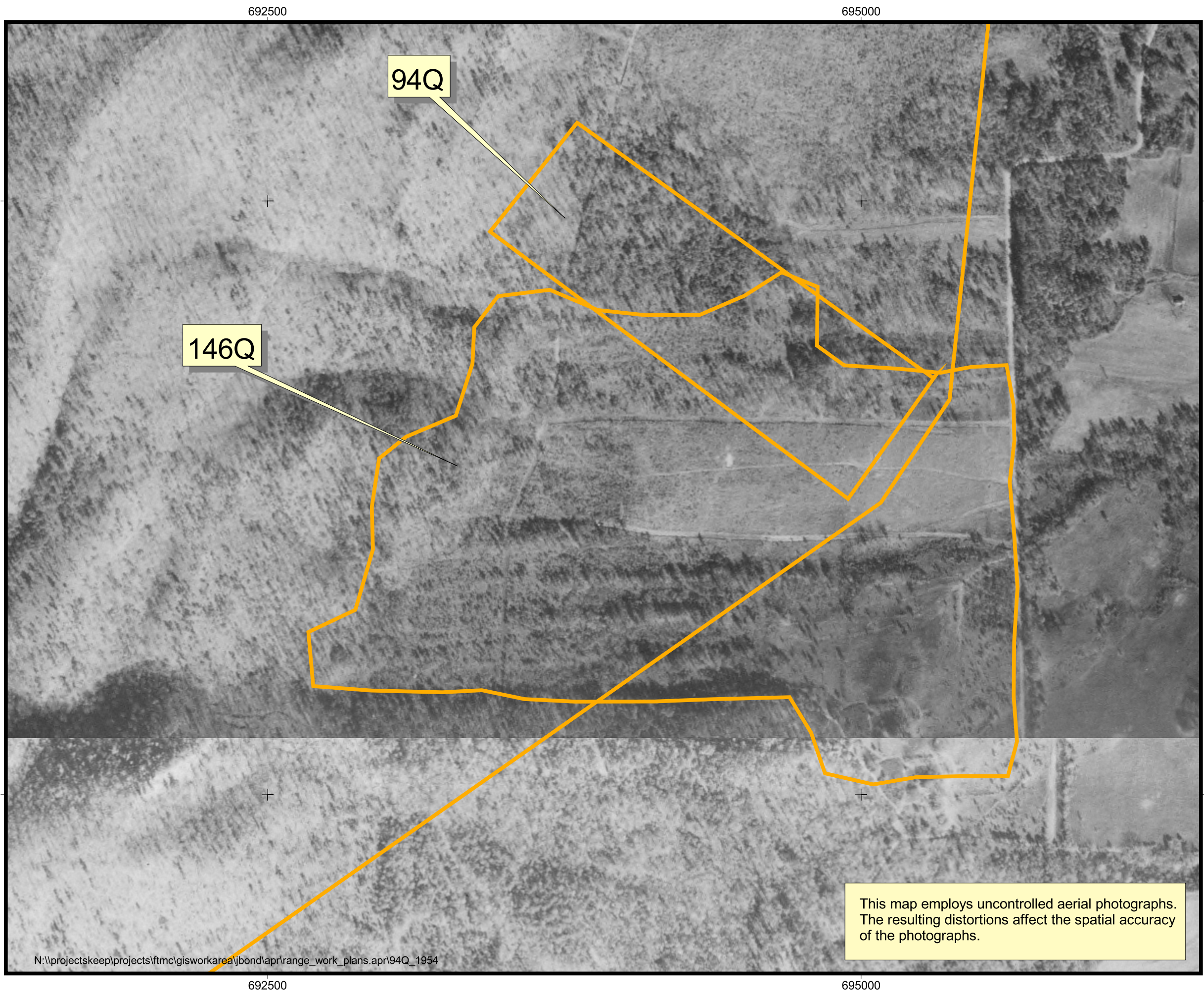



Figure 1-5

1954 Aerial Photograph

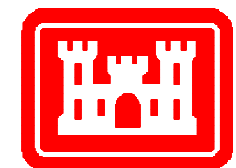
Former Range 40,
Parcel 94Q, and
Range, Choccolocco
Corridor, Parcel 146Q
Fort McClellan, AL

Legend

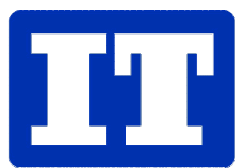
 Area of Investigation/
Parcel Boundary/
Range Safety Fan

0 400 Feet

NAD83 State Plane Coordinates



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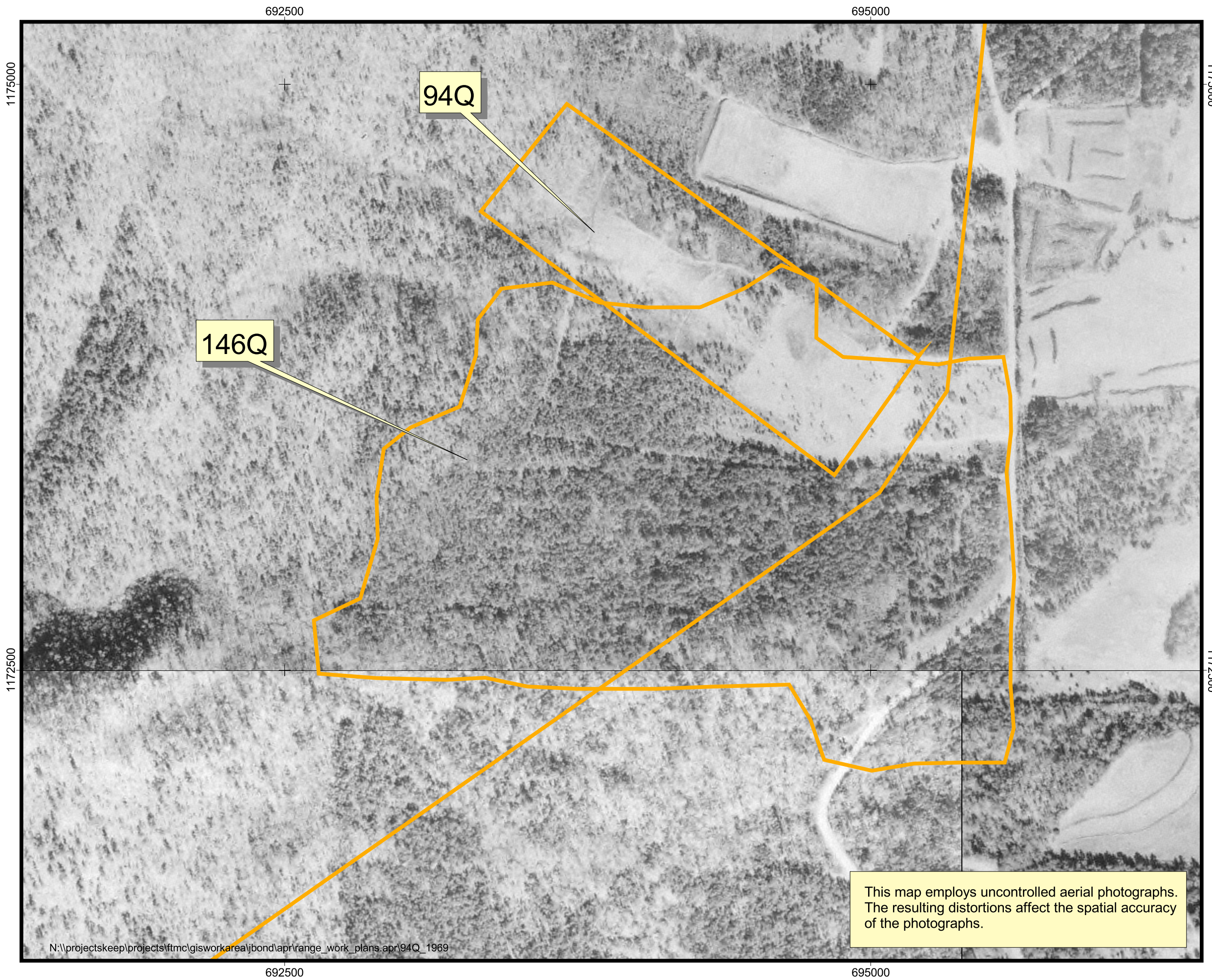


Figure 1-6

1969 Aerial Photograph

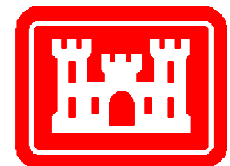
Former Range 40,
Parcel 94Q, and
Range, Choccolocco
Corridor, Parcel 146Q
Fort McClellan, AL

Legend

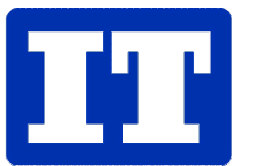
Area of Investigation/
Parcel Boundary/
Range Safety Fan

0 400 Feet

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1982. The 1982 photograph is similar to the 1976 photograph. The cleared area visible in 1976 remains. Vegetation appears to be thicker in this photograph than in the 1976 photograph.

1994. This aerial photograph, the only color photograph in the series, is similar to the 1976 and 1982 aerial photographs. The cleared area to the east is still visible, with dimensions similar to those in the 1976 and 1982 aerial photographs.

1998. No apparent changes in site features are visible in the 1998 aerial photograph since the 1994 photograph. The cleared area in the east remains similar in size.

Land elevation ranges from approximately 1,010 feet above mean sea level (amsl) near the western boundary of Parcel 146Q to approximately 740 feet amsl near the eastern boundary of the parcel. Surface water appears to drain to the east/southeast. Local shallow groundwater flow at the parcels is probably controlled by topography; therefore, groundwater flow in the residuum is likely to the east/southeast.

1.2.3 Soil Descriptions

The soils within Parcels 94Q and 146Q primarily consist of the following soil series: These are as follows:

- The Stony Rough Land series of soils
- The Anniston and Allen series of soils
- The Jefferson series of soils
- The Philo and Stendal series of soils.

The soils in the higher western elevations of the study area for Parcel 94Q and Parcel 146Q, located on the eastern foothills of the Choccolocco Mountains, consist of the Stony Rough Land sandstone series (Ss). This miscellaneous land type consists of a rough, mountainous area with many outcrops of sandstone and quartzite bedrock, loose rock fragments, and scattered patches of sandy soil material. Slopes are generally more than 25 percent. The soil material is generally present as a thin layer over bedrock. Depth to bedrock is typically less than 3 feet. Depth to groundwater is usually more than 20 feet (U.S. Department of Agriculture [USDA], 1961).

The Anniston and Allen series of soils consist of strongly acid, deep, well-drained soils that have developed in old local alluvium. The parent material washed from the adjacent, higher-lying

Linker, Muskingum, Enders, and Montevallo soils, which developed from weathered sandstone, shale, and quartzite. The Anniston and Allen soils are on foot slopes and colluvial fans at the bases of the Choccolocco, Coldwater, and Colvin Mountains. The surface horizon of the Allen soils is chiefly dark grayish-brown fine sandy loam or loam. The subsoil is dark red fine sandy clay loam. Fragments of sandstone and quartzite, as much as 8 inches in diameter, are on the surface and throughout the soil. The Allen soils are associated with the Anniston, Cane, Jefferson, and Locust soils. They differ from the Anniston only in having a lighter-colored surface horizon. For the Anniston and Allen soil series, the depth to bedrock typically ranges from 2 feet to greater than 10 feet, and depth to water is typically greater than 20 feet (USDA, 1961). Series members, or mapping units, of the Anniston and Allen soil series that are present in Parcels 94Q and 146Q include the following:

- Anniston soil series member AbB3, gravelly clay loam, 2 to 6 percent slopes, severely eroded. This soil mapping unit is present in the southeastern area of Parcel 146Q. This soil consists of areas that were formerly Anniston gravelly loam or Allen gravelly loam and that have lost nearly all their original surface soil through erosion. This soil type typically contains many small shallow gullies and a few deep ones. Infiltration is moderately slow, and the capacity to hold available moisture is low (USDA, 1961).
- Anniston and Allen soil series member AcB2, gravelly loams, 2 to 6 percent slopes eroded. This soil mapping unit, present in the central portion of the Parcel 94Q area of investigation and in the southwest portion of Parcel 146Q, consists of friable soils that have developed in old alluvium on foot slopes and along the base of mountains. Infiltration and runoff are medium, permeability is moderate, and the capacity for available moisture is high. Organic matter is moderate to low (USDA, 1961).
- Anniston and Allen soil series member AcC2, gravelly loams, 6 to 10 percent slopes, eroded. This soil mapping unit, present in the northeastern and northwestern portions of Parcel 146Q, consists of friable soils that developed in old alluvium on foot slopes and along the base of mountains. Severely eroded places may be more common in this unit on the surface, with a few gullies in places. Infiltration and runoff are medium, permeability is moderate, and the capacity for available moisture is high. Organic matter is moderate to low (USDA, 1961).
- The Anniston and Allen series member AdE, stony loam, 10 to 25 percent slope, is present in the western portions of the Parcel 94Q area of investigation and in Parcel 146Q. Characteristics that distinguish this series member from the Anniston and Allen gravelly loams, 2 to 6 percent slope, are stronger slopes, less erosion, and numerous stones. These soils are poorly suited to cultivation (USDA, 1961).

The Jefferson soil series consists of well-drained, strongly acid soils that occur in small areas on fans and on foot slopes in the Choccolocco, Colvin, and Coldwater Mountains. These soils have developed from old local alluvium that washed or sloughed from ridges of sandstone, shale, and Weisner quartzite. In many places the Jefferson soil series are associated with the Anniston, Allen, Cane, and Locust soils. For the Jefferson soil series, the depth to bedrock typically ranges from 2 feet to greater than 4 feet, and depth to water is typically greater than 20 feet. The Jefferson soil series member JeB2, gravelly fine sandy loam, 2 to 6 percent slopes, eroded, is present in the north-central area of Parcel 146Q. This friable soil has developed from old local alluvium on foot slopes and fans along the bases of ridges and mountains. Runoff and infiltration are medium. Permeability is moderate (USDA, 1961).

The fourth series of soils present within the area of investigation for Parcel 94Q and Parcel 146Q is the Philo and Stendal series of soils. The Philo series consists of strongly acid, moderately well-drained soils that are developing in local and general alluvium. The parent material washed mainly from sandstone and shale, but some of it originated from limestone. Philo soils occur on first bottoms along most streams in the northern part of Calhoun County. The surface soil is very dark grayish-brown to dark-brown fine sandy loam, and the subsoil is dark-brown, slightly mottled fine sandy loam (USDA, 1961).

The Stendal series consists of strongly acid, somewhat poorly drained soils that are developing in general alluvium that washed chiefly from sandstone and shale. Some of the material originated from limestone. These soils occur on first bottoms along most streams in the northern part of Calhoun County. The surface soil is a dark grayish-brown fine sandy loam, and the subsurface soil is a dark-brown, mottled fine sandy loam. Drainage in these soils ranges from somewhat poor to moderately good. For the Philo and Stendal series, the depth to bedrock is typically greater than 6 feet, with depth to water greater than 1 to 2 feet (USDA, 1961).

Soils that fall into the Philo and Stendal soils local alluvium, 0 to 2 percent slopes (PkA), are found along the surface water drainage features that originate in the upper elevations of the Choccolocco Mountains west of Parcels 94Q and 146Q. Two surface water drainage features are present in the northwestern area of Parcel 146Q. These surface water drainage features flow southeasterly through Parcel 146Q, converge into one drainage feature, and exit the site to the east. Neither of these surface water drainage features is located within the area of investigation for Parcel 94Q.

1.3 Scope of Work

The scope of work for SI field activities at Parcels 94Q and 146Q, as specified by the statement of work (USACE, 1999c), includes the following tasks:

- Develop the SFSP attachment.
- Develop the SSHP attachment.
- Develop the UXO safety plan attachment.
- Conduct a surface and near-surface UXO survey over all areas to be included in the sampling effort.
- Provide downhole UXO support for all intrusive drilling to determine buried downhole hazards.
- Collect 25 surface soil samples, 23 subsurface soil samples, 4 groundwater samples, and 6 depositional soil samples to determine whether potential site-specific chemicals (PSSC) are present at the site and to provide data useful for supporting any future corrective measures and closure activities.
- Analyze samples for the parameters listed in Section 4.5.

The possibility for UXO exists at this site because both parcels are either presumed or confirmed former active ranges; therefore, UXO surface sweeps and downhole surveys of soil borings will be required to support field activities at this site. The surface sweeps and downhole surveys will be conducted to identify anomalies for the purposes of UXO avoidance. The site-specific UXO safety plan attachment addresses the manner in which the avoidance will be conducted.

Following the field activities and sample analyses, a SI summary report will be prepared to evaluate the absence or presence of PSSCs at this site and to recommend further actions, if appropriate. The SI summary report will be prepared in accordance with current guidelines of the U.S. Environmental Protection Agency (EPA), Region IV, and Alabama Department of Environmental Management (ADEM).